

CUSTOMER NO.: 24498
Serial No.: 10/584,743
Notice of Appeal dated: 08/26/09
Appeal Brief dated: 01/26/10

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Sebastien Weitbruch et al.
Serial No.: 10/584,743
Filed: June 26, 2006
Title: METHOD AND DEVICE FOR PROCESSING
VIDEO DATA BY USING SPECIFIC BORDER
CODING
Examiner: Maurice L. McDowell, Jr.
Group Art Unit: 2628
Confirmation No.: 7753

APPELLANT'S BRIEF PURSUANT TO 37 C.F.R. § 41.37

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Alexandria, VA 22313-1450

May It Please The Honorable Board:

This brief is being filed in support of a Notice of Appeal filed in the above-identified application on August 26, 2009, appealing final rejections of claims 1 and 15-27 on May 17, 2009.

Please charge the \$540 fee for the filing of the Brief, the \$1110 fee for the Petition for a Three Month Extension of Time, and any other costs that may be due, to Deposit Account No. 07-0832.

1.0 REAL PARTY IN INTEREST

The real party in interest is THOMSON LICENSING, of Boulogne-Billancourt, France, as recorded on June 26, 2006 at Reel 018073, Frame 0794.

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2.0 RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

3.0 STATUS OF CLAIMS

Claims 1 and 15-27 are pending in the present application. Claims 2-14 are cancelled. Claims 1 and 15-27 stand finally rejected as a result of the May 27, 2009 Final Office Action. Claims 1 and 15-27 are the subject of this appeal.

4.0 STATUS OF AMENDMENTS

No amendments to the claims were filed after entry of Appellant's Non-Final Rejection Response dated February 26, 2009.

The listing of claims in the Claims Appendix (section 8 of this brief) reflects the state of the claims at the time of the Final Rejection.

5.0 SUMMARY OF CLAIMED SUBJECT MATTER

This Summary is intended to provide a concise explanation of subject matter defined in the independent claims, and in those dependent claims separately argued on appeal, in accordance with 37 C.F.R. § 41.37(c)(1)(v). This Summary is not intended to be used to limit the scope of the claimed subject matter.

Concise explanation of independent claim 1 with reference to specification and drawings:

Independent claim 1 recites a method for processing video data to be displayed on a display screen. Independent claim 1 can be understood with reference to examples in the indicated portions of Appellant's specification and drawings. The features of independent claim 1 include:

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1. Method for processing video data to be displayed on a display screen [e.g. page 6, line 12] by

providing said video data having video levels selected from a predetermined number of video levels [e.g. page 12, line 25 through page 14, line 25 and page 22, lines -22];

encoding said predetermined number of video levels with a corresponding number of subfield codewords, wherein to each bit of a subfield codeword a subfield is assigned, during which a cell of the display screen can be activated for light generation depending on the state of the corresponding bit of said subfield codeword [e.g. page 6, lines 15-21 and page 15, line 18 through page 21, line 29];

comprising the following steps:

encoding the video levels of said video data in a central area of the display screen with the corresponding subfield codewords [e.g. page 15, line 31 through page 20, line 16], and

encoding the video levels of said video data in a predetermined border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a change of a subfield bit from a binary 0 to a binary 1 in a selectable part of the codewords to prevent in said border area a cell which was not activated for a subfield in said selectable part from being activated for a following subfield in said selectable part, in order to avoid a response fidelity problem in said border area. [e.g. Figures 8-10, page 7, lines 4-7, and page 15, line 31 through page 21, line 29]

Claims 15-19 depend from independent Claim 1.

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Concise explanation of independent claim 20 with reference to specification and drawings:

Independent claim 20 recites a device for processing video data to be displayed on a display screen. Independent claim 20 can be understood with reference to examples in the indicated portions of Appellant's specification and drawings. The features of independent claim 20 include:

20. Device for processing video data to be displayed on a display screen [e.g. Figure 19 and page 21, line 34 through page 23, line 17] comprising:

data providing means for providing said video data having video levels selected from a predetermined number of video levels [e.g. power measurement block 2, video mapping block 3, control system block 4, and border select block 5 of Figure 19; page 22, lines 1-21];

encoding means for encoding said predetermined number of video levels with a corresponding number of subfield codewords [e.g. sub-field coding block 7 and control system block 4 of Figure 19; page 22, lines 25-29]; and

illuminating means for illuminating pixels in a central area of said display screen in accordance with said subfield codewords [e.g. plasma display panel 10 and control system block 4 in Figure 19];

wherein said illuminating means is adapted for illuminating pixels in a border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a change of a subfield bit from a binary 0 to a binary 1 in a selectable part of the subfield codewords. [e.g. control system block 4, 2-frame memory 8, serial parallel conversion block 9 of Figure 19; page 22, line 29 through page 23, line 17]

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Claims 21-25 depend from claim 20.

Concise explanation of independent claim 26 with reference to specification and drawings:

Independent claim 26 recites a method for processing video data to be displayed on a display screen. Independent claim 26 can be understood with reference to examples in the indicated portions of Appellant's specification and drawings. The features of independent claim 26 include:

26. Method for processing video data to be displayed on a display screen [e.g. *page 6, line 12*] by

providing said video data having video levels selected from a predetermined number of video levels [e.g. *page 12, line 25 through page 14, line 25 and page 22, lines -22*]; and

encoding said predetermined number of video levels with a corresponding number of subfield codewords, wherein to each bit of a subfield codeword a subfield is assigned, during which a cell of the display screen can be activated for illuminating pixels depending on the state of the corresponding bit of said subfield codeword [e.g. *page 6, lines 15-21 and page 15, line 18 through page 21, line 29*] comprising the following steps:

encoding the video levels of said video data in a central area of the display screen with the corresponding subfield codewords [e.g. *page 15, line 31 through page 20, line 16*]; and

encoding the video levels of said video data in a predetermined border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a binary 0 between two binary 1 in a selectable part of the subfield codewords to prevent in said border area a cell which was not activated for a subfield in said

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selectable part from being activated for a following subfield in said selectable part, in order to avoid a response fidelity problem in said border area. [e.g.

Figures 8-10, page 7 lines 4-7, and page 15, line 31 through page 21, line 29]

Concise explanation of independent claim 27 with reference to specification and drawings:

Independent claim 20 recites a device for processing video data to be displayed on a display screen. Independent claim 20 can be understood with reference to examples in the indicated portions of Appellant's specification and drawings. The features of independent claim 20 include:

27. Device for processing video data to be displayed on a display screen [e.g. *Figure 19 and page 21, line 34 through page 23, line 17*] comprising:

data providing means for providing said video data having video levels selected from a predetermined number of video levels [e.g. *power measurement block 2, video mapping block 3, control system block 4, and border select block 5 of Figure 19; page 22, lines 1-21*];

encoding means for encoding said predetermined number of video levels with a corresponding number of subfield codewords, wherein to each bit of a subfield codeword a subfield is assigned, during which a cell of the display screen can be activated for illuminating pixels depending on the state of the corresponding bit of said subfield codeword; [e.g. *sub-field coding block 7 and control system block 4 of Figure 19; page 22, lines 25-29*] and

illuminating means for illuminating pixels in a central area of said display screen in accordance with said subfield codewords [e.g. *plasma display panel 10 and control system block 4 in Figure 19*];

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wherein said illuminating means is adapted for illuminating pixels in a border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a binary 0 between two binary 1 in a selectable part of the subfield codewords to prevent in said border area a cell which was not activated for a subfield in said selectable part from being activated for a following subfield in said selectable part, in order to avoid a response fidelity problem in said border area. [e.g. control system block 4, 2-frame memory 8, serial parallel conversion block 9 of Figure 19; Figures 8-10; page 7, lines 4-7; page 15, line 31 through page 21, line 29; and page 22, line 29 through page 23, line 17]

6.0 GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1, 15-27 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Kimura (Publication No.: US 2003/0193451 A1) in view of Tokunaga et al. (US 6,417,824 B1).

7.0 ARGUMENT

In the Final Office Action dated May 27, 2009 the Examiner cited a new reference Tokunaga et al. (US 6,417,824 B1) in response to amendments made by Applicants. Applicants respectfully disagree also with the Examiner's findings in view of new reference cited in the final Office Action, because distinguishing features again have been overlooked or not taken into account, references have not been correctly recited and that the final rejection also reads on contradictions in itself.

The present invention deals with encoding of video signal into subfield codewords in plasma wherein border areas are encoded in a specific manner. Indeed, the title of the present invention is "METHOD AND DEVICE FOR PROCESSING VIDEO DATA BY USING SPECIFIC BORDER CODING" and independent claims include encoding the video levels of said video data in a central area of the display screen with the corresponding subfield codewords, and encoding the video levels of said

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video data in a predetermined border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a change of a subfield bit from a binary 0 to a binary 1 (or do not have a binary 0 between two binary 1) in a selectable part of the subfield codewords.

Applicants respectfully submit that Kimura does not disclose, teach or suggest this concept nor the claim language set forth above. The Examiner has been inconsistent as to what is disclosed in Kimura. In the Office Action of September 26, 2009 the Examiner agreed: "**Kimura doesn't teach: illuminating pixels in a central area of said display screen in accordance with said codewords, illuminating pixels in a border area surrounding said central area of said display screen by using only those codewords of said number of codewords**" (See page 2, paragraph 4 of the Office action dated September 26, 2008). The Examiner thus relied on the Hashimoto reference to disclose these elements. However, in the final rejection the Hashimoto reference is no longer applied and the Examiner now states, "Kimura teaches: ... encoding the video levels of said video data in a central area of the display screen with the corresponding subfield codewords (fig. 2)." (See page 2, paragraph 3 of the Final Office Action dated May 27, 2009). Thus, the Examiner appears to be reapplying a reference (Kimura) for an element that the Examiner already admitted is not disclosed by the reference. In fact, Kimura neither discloses nor gives a hint to encode video levels different in the central area and in border area surrounding said central area as set forth in the present invention.

In the final office action of May 27, 2009, the Examiner relies on Tokunaga reference to make up the deficiencies of Kimura stating "Tokunaga teaches: encoding the video levels of said video data in a predetermined border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a change of a subfield bit from a binary 0 to a binary 1 in a selectable part of the subfield codewords to prevent in said border area a cell which was not activated for a subfield in said selectable part from being activated for a following subfield in said selectable part, in order to avoid a

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response fidelity problem in said border area (fig. 28 see also col. 18 lines 32-41) (The subfield codewords (HD) do not have a change from binary 0 to 1 in a selectable part) for the benefit of to provide a method of driving a plasma display panel which is capable of improving the contrast at low power consumption while suppressing spurious borders, and capable of stabilizing selective discharge to improve the display quality" (See page 3, paragraph 5). Applicants disagree with this assertion and respectfully submit that Tokunaga neither discloses nor gives a hint to encode video levels different in the central area and in border area surrounding said central area.

Tokunaga does not deal with encoding video levels differently in the central area of a display and in border area surrounding said central area of the display as set forth in the present invention. Tokunaga is related to selective erasing discharge, which is repeated if the first selective erasing discharge possibly fails to write pixel data for improving the contrast at low power consumption while suppressing spurious borders (between pixels), and stabilizing selective discharge.

In fact, this is what is actually depicted in fig. 28. (which the Examiner referenced in support of the assertion about Tokunaga) Review of the specification reveals that Column 18, lines 32-41 reads: "Specifically, in FIG. 28, '*' indicates that the bit may be at logical '1' or '0,' and a sequence of triangles indicates that the selective erasing discharge is performed continuously as long as the bit indicated by '*' remains at logical '1.' In essence, since the first selective erasing discharge possibly fails to write pixel data, the selective erasing discharge is repeated in at least one of the subsequent subfields to ensure that the pixel data is written."

Consequently, the present invention as set forth in claims 1 and 15-27, is neither disclosed nor suggested by the either Kimura or Tokunaga, alone nor in combination. Thus claims 1 and 15-27 are not obvious under 35 U.S.C. §103(a). Consequently, withdrawal of the rejection of claim 1 and 15-27 is respectfully requested.

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8.0 CLAIMS APPENDIX

A complete listing of the claims involved in this appeal is attached hereto as Appendix A.

9.0 EVIDENCE APPENDIX

Appellants do not submit any additional evidence and, therefore, an Appendix B is hereby attached indicating "none."

10.0 RELATED PROCEEDINGS APPENDIX

Appellants state

that there are no relevant related proceedings and, an Appendix C is hereby attached indicating "none."

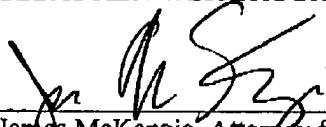
11.0 Conclusion

For all of the foregoing reasons, Appellants respectfully request that the Board reverse the 35 U.S.C. §103(a) rejection of Claims 1 and 15-27, and direct the Examiner to issue a Notice of Allowance for all pending claims.

Respectfully submitted,

SEBASTIEN WEITBRUCH ET AL.

By:



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JM:pdf

Attachments:

- Appendix A: Claims on Appeal
- Appendix B: Evidence
- Appendix C: Related Proceedings

Patent Operations
Thomson Licensing LLC
P.O. Box 5312
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APPENDIX A

The following is a listing of all claims, pending or canceled, incorporating all elements and revisions to date. All non-canceled claims are on appeal, canceled claims being canceled without prejudice or disclaimer.

1. (Previously Presented) Method for processing video data to be displayed on a display screen by

providing said video data having video levels selected from a predetermined number of video levels;

encoding said predetermined number of video levels with a corresponding number of subfield codewords, wherein to each bit of a subfield codeword a subfield is assigned, during which a cell of the display screen can be activated for light generation depending on the state of the corresponding bit of said subfield codeword;

comprising the following steps:

encoding the video levels of said video data in a central area of the display screen with the corresponding subfield codewords, and

encoding the video levels of said video data in a predetermined border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a change of a subfield bit from a binary 0 to a binary 1 in a selectable part of the codewords to prevent in said border area a cell which was not activated for a subfield in said selectable part from being activated for a following subfield in said selectable part, in order to avoid a response fidelity problem in said border area.

2-14. (canceled)

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15. (Previously Presented) Method according to claim 1, wherein video levels corresponding to subfield codewords being not used are recreated by dithering.

16. (Previously Presented) Method according to claim 1, wherein said selectable part of the subfield codewords, which shall not have a change of a subfield bit from a binary 0 to a binary 1, is determined by a power level of a picture to be displayed.

17. (Previously Presented) Method of claim 1, wherein said part of the subfield codewords being determined to be with no change of a subfield bit from a binary 0 to a binary 1 includes the most significant bits of the subfield codewords.

18. (Previously Presented) Method according to claim 1, wherein the border area is divided into several sub-areas, a first one of said several sub-areas being illuminated by subfield codewords with a first selectable part with no change of a subfield bit from a binary 0 to a binary 1 and a second one of said several areas being illuminated by subfield codewords with a second selectable part with no change of a subfield bit from a binary 0 to a binary 1, which second selectable part includes the first selectable part of subfield codewords or at least a portion of it or which is different from the first selectable part.

19. (previously presented) Method according to claim 1, wherein cells of the display screen are subjected to dynamic priming.

20. (Previously Presented) Device for processing video data to be displayed on a display screen comprising:

data providing means for providing said video data having video levels selected from a predetermined number of video levels;

encoding means for encoding said predetermined number of video levels with a corresponding number of subfield codewords; and

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illuminating means for illuminating pixels in a central area of said display screen in accordance with said subfield codewords;

wherein said illuminating means is adapted for illuminating pixels in a border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a change of a subfield bit from a binary 0 to a binary 1 in a selectable part of the subfield codewords.

21. (Previously Presented) Device according to claim 20, further comprising dithering means for recreating video levels corresponding to subfield codewords being not used.

22. (Previously Presented) Device according to claim 20, further comprising a power level determining means for determining the power level of said video data, so that said part of the subfield codewords with no change of a subfield bit from a binary 0 to a binary 1 is determinable on the basis of said power level.

23. (Previously Presented) Device of claim 20, wherein said part of the subfield codewords being determined to be with no change of a subfield bit from a binary 0 to a binary 1 includes the most significant bits of the subfield codewords.

24. (Previously Presented) Device according to claim 20, wherein said illuminating means is adapted to divide said border area into several sub-areas, a first one of said several sub-areas being illuminable by subfield codewords with a first selectable part with no change of a subfield bit from a binary 0 to a binary 1 and a second one of said several sub-areas being illuminable by subfield codewords with a second selectable part with change of a subfield bit from a binary 0 to a binary 1, which second selectable part includes the first selectable part of subfield codewords or at least a portion of it or which is different from the first selectable part.

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25. (Previously Presented) Device according to claim 20, further comprising dynamic priming means for dynamically priming cells of the display screen.

26. (Previously Presented) Method for processing video data to be displayed on a display screen by

providing said video data having video levels selected from a predetermined number of video levels; and

encoding said predetermined number of video levels with a corresponding number of subfield codewords, wherein to each bit of a subfield codeword a subfield is assigned, during which a cell of the display screen can be activated for illuminating pixels depending on the state of the corresponding bit of said subfield codeword comprising the following steps:

encoding the video levels of said video data in a central area of the display screen with the corresponding subfield codewords; and

encoding the video levels of said video data in a predetermined border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a binary 0 between two binary 1 in a selectable part of the subfield codewords to prevent in said border area a cell which was not activated for a subfield in said selectable part from being activated for a following subfield in said selectable part, in order to avoid a response fidelity problem in said border area.

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27. (Previously Presented) Device for processing video data to be displayed on a display screen comprising:

data providing means for providing said video data having video levels selected from a predetermined number of video levels; encoding means for encoding said predetermined number of video levels with a corresponding number of subfield codewords, wherein to each bit of a subfield codeword a subfield is assigned, during which a cell of the display screen can be activated for illuminating pixels depending on the state of the corresponding bit of said subfield codeword; and

illuminating means for illuminating pixels in a central area of said display screen in accordance with said subfield codewords; wherein said illuminating means is adapted for illuminating pixels in a border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a binary 0 between two binary 1 in a selectable part of the subfield codewords to prevent in said border area a cell which was not activated for a subfield in said selectable part from being activated for a following subfield in said selectable part, in order to avoid a response fidelity problem in said border area.

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APPENDIX B

None.

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APPENDIX C

None